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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 February 2007</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-38,43,45 and 46* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-38,43,45 and 46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All b)☐ Some * c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in the pending application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-3, 9, 10, 12-16, 22-30, 33-35, 38, 43, 45 and 46 are rejected under 35 U.S.C.

103(a) as being unpatentable over Ishii et al. (U.S. Patent 5,982,416) in view of Ohta (U.S.

Patent 6,108,008).

In reference to claims 1, 13, 14, 25-27, 45 and 46, Ishii et al. discloses an image

processing apparatus and method performing color matching processing of image data along

with device profile data transfers (see column 1, lines 6-9). Ishii et al. discloses the apparatus

comprising of an image pickup unit and scanner which both generate image data into the system

(see column 3, lines 51-61). Ishii et al. also discloses a data reception unit receiving data from

the image pickup unit and scanner device (see column 4, lines 11-16). Ishii et al. discloses a

CMS process unit which comprises of input and output device color matching processes coupled

to both input and output device profile storage units (see column 4, lines 34-39 and #14 and 15

of Figure 1 and #14, 15, 23, 24, 26 and 25 of Figure 3). Ishii et al. further goes on to disclose the

output profile data possibly being conversion data including color space compression

instructions according to color reproducible by the output device (see column 4, lines 50-53).

Note, the Office interprets the CMS process unit acting functionally equivalent to the output

control data acquisition mechanism of Applicant's claims since the output device CMS unit (#24

of Figure 3) acquires output device color reproducible data defining the conditions set forth by

the output device to faithfully display image data. Ishii et al. also discloses implementing

multiple output devices, therefore requiring multiple output device profiles, each profile

associated with a specific output device (see column 4, lines 20-30, columns 4-5, lines 65-4 and

#21 and 22 of Figure 1). Note, the Office interprets Ishii et al. to disclose outputting to an output

device when Ishii et al. discloses outputting profile characteristic data multiplexed with image

data (see column 5, lines 21-24 and Figure 4). Also, Ishii et al. explicitly discloses embedding

characteristic data (profile data) based on the type of output device with image data (see column

7, lines 32-34). Ishii et al. discloses a data multiplexing unit in a transmission-side configuration

of the device, for embedding color space characteristic data, in a file with image data and

transmitting this file as output (see column 7, lines 20-45 and Figures 8 and 16). Note, Ishii et al.

also discloses alternatively, embedding characteristic data based on the type of output device,

with image data (see column 7, lines 32-34). Although Ishii et al. discloses outputting profile

characteristic data including color space compression instructions, Ishii et al. does not explicitly

disclose outputting output control data designating image processing conditions to be carried out

by each of a plurality of output devices. Ohta discloses an image processing apparatus able to

faithfully reproduce a desired color under the output conditions of predetermined output means

(see column 1, lines 5-9 and 61-64). Ohta discloses the system to comprise of a monitor setting means that sets the kind of monitor utilized in the system, a printer setting means that sets the kind of printer utilized in the system and a printer condition setting means used to set various output conditions of the printer (see column 4, lines 3-4, 16-22 and Figure 2, #8, 9 and 12). Ohta explicitly discloses one of the settings to be the binarization method setting for setting the binarizing method to be employed in the printer (see column 4, lines 16-33 and Figure 2, #6 and 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the output conditions setting techniques of Ohta with the CMS profile processing techniques of Ishii et al. in order to faithfully reproduce image data visually perceived on a monitor output device onto a printer output device allowing for differences in processed color data between devices to be compensated for (see column 1, lines 28-47, 61-63 and column 2, lines 1-4).

In reference to claims 2 and 15, Ishii et al. and Ohta disclose all of the claim limitations as applied to claims 1 and 14 respectively above. Ohta discloses a printer kind setting means used to set the kind of printer connected to the system (see column 4, lines 18-20 and Figure 2, #8). Note, the Office interprets such data supplied by the printer kind setting means of Ohta to inherently provide "identifying information" for identifying the output device(s).

In reference to claims 3 and 16, Ishii et al. and Ohta disclose all of the claim limitations as applied to claims 1 and 14 respectively above. Ishii et al. discloses implementing multiple output devices, therefore requiring multiple output device profiles, each profile associated with a specific output device (see column 4, lines 20-30, columns 4-5, lines 65-4 and #21 and 22 of Figure 1). The Office interprets the output device corresponding CMS process unit acting

functionally equivalent to the designating mechanism of Applicant's claims since it must choose

the correct profile for each output device designated to received image data (see column 4, lines

20-30).

In reference to claims 9 and 22, Ishii et al. and Ohta disclose all of the claim limitations

as applied to claims 1 and 14 respectively above in addition, Ohta discloses an output profile

storage means for holding printer profile data set and read by an output profile setting/reading

means (see column 4, lines 50-64 and #5 and 7 of Figure 2).

In reference to claims 10 and 23, Ishii et al. and Ohta disclose all of the claim limitations

as applied to claims 1 and 14 respectively above. Although Ishii et al. discloses a CMS process

unit which comprises of input and output device color matching processes coupled to both input

and output device profile storage units (see column 4, lines 34-39 and #14 and 15 of Figure 1 and

#14, 15, 23, 24, 26 and 25 of Figure 3), Ishii et al. does not explicitly disclose generating profile

data. Ohta discloses the system to comprise of a monitor setting means that sets the kind of

monitor utilized in the system, a printer setting means that sets the kind of printer utilized in the

system and a printer condition setting means used to set various output conditions of the printer

(see column 4, lines 3-4, 16-22 and Figure 2, #8, 9 and 12). Ohta discloses an output profile

storage means for holding printer profile data set and read by an output profile setting/reading

means (see column 4, lines 50-64 and #5 and 7 of Figure 2).

In reference to claims 12 and 28, claims 12 and 28 are equivalent in scope to claims 1,

13, 14 and 25-27 and are therefore rejected in a similar manner. In addition, Ishii et al. also

discloses the apparatus comprising a computer that includes RAM and ROM memories for

storing a program to perform the above CMS methods (see column 4, lines 5-10). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to implement

the output conditions setting techniques of Ohta with the CMS profile processing techniques of

Ishii et al. in order to faithfully reproduce image data visually perceived on a monitor output

device onto a printer output device allowing for differences in processed color data between

devices to be compensated for (see column 1, lines 28-47, 61-63 and column 2, lines 1-4).

In reference to claim 24, Ishii et al. and Ohta disclose all of the claim limitations as

applied to claim 14 above. Ishii et al. discloses the apparatus comprising of an image pickup unit

and scanner which both generate image data into the system (see column 3, lines 51-61). Ishii et

al. also discloses a data reception unit receiving data from the image pickup unit and scanner

device (see column 4, lines 11-16).

In reference to claims 29, 33 and 34, Ishii et al. discloses an image processing apparatus

and method performing color matching processing of image data along with device profile data

transfers (see column 1, lines 6-9). Ishii et al. discloses the apparatus comprising of an image

pickup unit and scanner which both generate image data into the system (see column 3, lines 51-

61). Ishii et al. also discloses a data reception unit receiving data from the image pickup unit and

scanner device (see column 4, lines 11-16). Ishii et al. discloses a CMS process unit which

comprises of input and output device color matching processes coupled to both input and output

device profile storage units (see column 4, lines 34-39 and #14 and 15 of Figure 1 and #14, 15,

23, 24, 26 and 25 of Figure 3). Ishii et al. further goes on to disclose the output profile data

possibly being conversion data including color space compression instructions according to color

reproducible by the output device (se column 4, lines 50-53). Note, the Office interprets the

CMS process unit acting functionally equivalent to the output control data acquisition

mechanism of Applicant's claims since the output device CMS unit (#24 of Figure 3) acquires

output device color reproducible data defining the conditions set forth by the output device to

faithfully display image data. Ishii et al. also discloses implementing multiple output devices,

therefore requiring multiple output device profiles, each profile associated with a specific output

device (see column 4, lines 20-30, columns 4-5, lines 65-4 and #21 and 22 of Figure 1). Note,

the Office interprets Ishii et al. to disclose outputting to an output device when Ishii et al.

discloses outputting profile characteristic data multiplexed with image data (see column 5, lines

21-24 and Figure 4). Also, Ishii et al. explicitly discloses embedding characteristic data (profile

data) based on the type of output device with image data (see column 7, lines 32-34). Ishii et al.

discloses a data multiplexing unit in a transmission-side configuration of the device, for

embedding color space characteristic data, in a file with image data and transmitting this file as

output (see column 7, lines 20-45 and Figures 8 and 16). Note, Ishii et al. also discloses

alternatively, embedding characteristic data based on the type of output device, with image data

(see column 7, lines 32-34). Although Ishii et al. discloses outputting profile characteristic data

including color space compression instructions, Ishii et al. does not explicitly disclose outputting

output control data designating image processing conditions to be carried out by each of a

plurality of output devices. Ohta discloses an image processing apparatus able to faithfully

reproduce a desired color under the output conditions of predetermined output means (see

column 1, lines 5-9 and 61-64). Ohta discloses the system to comprise of a monitor setting

means that sets the kind of monitor utilized in the system, a printer setting means that sets the

kind of printer utilized in the system and a printer condition setting means used to set various

output conditions of the printer (see column 4, lines 3-4, 16-22 and Figure 2, #8, 9 and 12). Ohta

explicitly discloses one of the settings to be the binarization method setting for setting the

binarizing method to be employed in the printer (see column 4, lines 16-33 and Figure 2, #6 and

9). It would have been obvious to one of ordinary skill in the art at the time the invention was

made to implement the output conditions setting techniques of Ohta with the CMS profile

processing techniques of Ishii et al. in order to faithfully reproduce image data visually perceived

on a monitor output device onto a printer output device allowing for differences in processed

color data between devices to be compensated for (see column 1, lines 28-47, 61-63 and column

2, lines 1-4).

In reference to claims 30 and 35, Ishii et al. and Ohta disclose all of the claim limitations

as applied to claims 29 and 34 respectively above. Ishii et al. discloses a CMS process unit

which comprises of input and output device color matching processes coupled to both input and

output device profile storage units (see column 4, lines 34-39 and #14 and 15 of Figure 1 and

#14, 15, 23, 24, 26 and 25 of Figure 3). Note, the Office believes the apparatus of Ishii et al.

inherently acquires new or different profile data when the output device, the target device

receiving the processed image data, is changed. Further, Ohta discloses an output profile storage

means for holding printer profile data set and read by an output profile setting/reading means

(see column 4, lines 50-64 and #5 and 7 of Figure 2).

In reference to claim 38, claim 38 is equivalent in scope to claims 29, 33 and 34 and is

therefore rejected in a similar manner. In addition, Ishii et al. also discloses the apparatus

comprising a computer that includes RAM and ROM memories for storing a program to perform

the above CMS methods (see column 4, lines 5-10). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to implement the output conditions

setting techniques of Ohta with the CMS profile processing techniques of Ishii et al. in order to

faithfully reproduce image data visually perceived on a monitor output device onto a printer

output device allowing for differences in processed color data between devices to be

compensated for (see column 1, lines 28-47, 61-63 and column 2, lines 1-4).

In reference to claim 43, Ishii et al. and Ohta disclose all of the claim limitations as

applied to claim 1 above. Ohta explicitly discloses one of the settings to be the binarization

method setting for setting the binarizing method to be employed in the printer (see column 4,

lines 16-33 and Figure 2, #6 and 9).

3.   Claims 4-8, 17-21, 31, 32, 36 and 37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ishii et al. (U.S. Patent 5,982,416), Ohta (U.S. Patent 6,108,008) and further in

view of Kohler et al. (U.S. Patent 5,646,752).

In reference to claims 4, 17, 31, 32, 36 and 37, Ishii et al. and Ohta disclose all of the

claim limitations as applied to claims 2, 15, 29, 30 and 34 respectively above however, neither

Ishii et al. or Ohta explicitly disclose identifying at least one classification selected from a group

of classifications consisting of output device category, output device format, manufacturer, and

output device model name. Kohler et al. discloses a system for modifying device profile tags

(see column 1, lines 64-67 of Kohler et al.). Kohler et al. discloses the profiles comprising of a

"DeviceModel" tag stored within the profile (see column 9, lines 11-19). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to implement the

device profile formatting of Kohler et al. with the output conditions setting techniques of Ohta

and CMS profile processing techniques of Ishii et al. in order to allow for customizable data to

be stored and represented in device profiles, aiding in color transformation processing of image

data (see column 2, lines 7-41 of Kohler et al.). Note, in reference to claims 31 and 36, the Office interprets that the tag information of Kohler et al. inherently identifies and is designated to each device. Note, in reference to claim 32 and 37, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the device profile formatting of Kohler with the output conditions setting techniques of Ohta and CMS profile processing techniques of Ishii et al., enabling the output device CMS processing unit of Ishii et al. to select the correct device profile based on a device name or model, to aid in the CMS processing of image data by allowing for customizable data to be stored (device model/name information) and accessed in the device profiles (see column 2, lines 7-41 of Kohler et al.).

In reference to claims 5, 6, 18 and 19, Ishii et al. and Ohta disclose all of the claim limitations as applied to claims 3 and 16 above however, neither Ishii et al. or Ohta explicitly disclose the output device CMS process unit acquiring profile data with reference to a classification level. Kohler et al. discloses a system for modifying device profile tags (see column 1, lines 64-67 of Kohler et al.). Kohler et al. discloses the profiles comprising of a "DeviceModel" tag stored within the profile (see column 9, lines 11-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the device profile formatting of Kohler with the output conditions setting techniques of Ohta and CMS profile processing techniques of Ishii et al., enabling the output device CMS processing unit of Ishii et al. to select the correct device profile based on a device name or model, to aid in the CMS processing of image data by allowing for customizable data to be stored (device model/name information) and accessed in the device profiles (see column 2, lines 7-41 of Kohler et al.).

In reference to claims 7 and 20, Ishii et al., Ohta and Kohler et al. disclose all of the claim limitations as applied to claims 4 and 17 respectively above. Ishii et al. also discloses implementing multiple output devices, therefore requiring multiple output device profiles, each profile associated with a specific output device (see column 4, lines 20-30, columns 4-5, lines 65-4 and #21 and 22 of Figure 1). Kohler et al. discloses the profiles comprising of a "DeviceModel" tag stored within the profile (see column 9, lines 11-19).

In reference to claims 8 and 21, Ishii et al., Ohta and Kohler et al. disclose all of the claim limitations as applied to claims 7 and 20 respectively above. Neither Ishii et al., Ohta or Kohler et al. explicitly disclose the output formats including xerographic printing, sublimation printing, ink jet printing, CRT display, LCD display, projection display, transmissive display, and reflective display formats. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to include the above specific output formats in the CMS profile format and processing techniques of Ishii et al., Ohta and Kohler et al.. Applicant has not disclosed that supporting these specific output formats provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the monitor and printer profiles of Ishii et al. and Ohta because the office interprets the exact output format that image data is transformed into to be a matter of design choice as preferred by the designer and to which best suits the applicant at hand. Further, the specific manner in which the image data is ultimately displayed or printed is seen to provide no immediate criticality to the application at hand. Therefore, it would have been obvious to one of ordinary skill in this art to modify the

combination of Ishii et al., Ohta and Kohler et al. to obtain the invention as specified in claims 8 and 21.

Response to Arguments

4.   Applicant's arguments, see page 13 of Applicant's Remarks, filed 02/27/07, with respect to the 35 USC 112, 2nd paragraph rejection of claims 1-10, 12-24, 29-38, 43 and 46, have been fully considered and are persuasive. The 35 USC 112, 2nd paragraph rejection of the above claims has been withdrawn since amendments to the claims correct previous 35 USC 112 issues.

5.   Applicant's arguments, see page 13 of Applicant's Remarks, filed 02/27/07, with respect to 35 USC 101 rejections of claims 1-10, 43, 45 and 46 have been fully considered and are persuasive. The 35 USC 101 rejection of the above claims has been withdrawn. Amendments to claims 12, 28 and 38 remedy previous 35 USC 101 issues while a change in Office interpretation of 35 USC 101 allows for the withdrawal of the 35 USC 101 rejection for the other noted claims.

6.   Applicant's arguments, see pages 14-15 of Applicant's Remarks, filed 02/27/07, with respect to the rejection(s) of claim(s) 1-10, 12-38, 43, 45 and 46 under 35 USC 102(b) and 103(a), in view of Ishii et al. and Kohler et al., have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ishii et al., Ohta, and Kohler et al. and .

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung, can be reached at (571) 272-7794.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 (Central Fax)

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Technology Center 2600 Customer Service Office whose telephone

number is (571) 272-2600.

aac

Antonio Caschera

6/8/07

Patent Examiner

KEE M. TUNG

SUPERVISORY PATENT EXAMINER